

REMARKS

I. General

Claims 1-11 and 14-30 are pending in the application. Claims 12, 13, 31 and 32 have been canceled. Claims 1, 8-10, 14-19, 21, and 23-30 are currently amended.

The issues in the Office Action mailed September 19, 2007 are as follows:

- Drawing objection: re. cardiac pacemaker.
- Claims 14, 19: re. informalities, “PTT”
- Claims 8-15, 24, 25, 31 and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by Miles ‘788.
- Claims 21 and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cui ‘296.
- Claims 17-20 were rejected under 35 U.S.C. § 103(a) as being obvious over Miles ‘788.
- Claims 1, and 27-29 were rejected under 35 U.S.C. § 103(a) as being obvious over Miles ‘788 in view of Genger.
- Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being obvious over Miles ‘788 as modified by Genger and in view of Kwok.
- Claim 4 was rejected under 35 U.S.C. § 103(a) as being obvious over Miles ‘788 as modified by Genger and Kwok and in view of Cui.
- Claims 5 and 7 were rejected under 35 U.S.C. § 103(a) as being obvious over Miles, Genger, Kwok, Cui and in view of Drousseau.

- Claim 6 was rejected under 35 U.S.C. § 103(a) as being obvious over Miles, Genger, and in view of Brown.
- Claims 16 and 23 were rejected under 35 U.S.C. § 103(a) as being obvious over Miles in view of Brown.
- Claim 26 was rejected under 35 U.S.C. § 103(a) as being obvious over Tripp.
- Claim 30 was rejected under 35 U.S.C. § 103(a) as being obvious over Miles, as modified by Genger and in view of Tripp.

Applicant hereby traverses the outstanding rejections and objections and requests reconsideration and withdrawal in light of the remarks and amendments contained herein.

II. Drawings

The Examiner objected to the drawings as not showing a “cardiac pacemaker.” The “cardiac pacemaker” feature has been canceled from the claims. Therefore, Applicant respectfully requests that the objection to the drawings be withdrawn.

III. Objections

The Examiner objected to the claims for including the term “PPT,” and proposed that the term “PPT” be written out in the claims. Applicant has amended the claims reciting “PPT” (claims 15 and 19) as proposed by the Examiner. Therefore, Applicant respectfully requests that the objection related to “PPT” be withdrawn.

The Examiner also objected to the numbering of the claims. Applicant has renumbered the claims as proposed by the Examiner. Therefore, Applicant respectfully requests that the objection related to the claim numbering be withdrawn.

IV. Claim Rejections 35 USC 102

Claims 8-15, 24, 25, 31, and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,353,788, the “Miles” patent.

Claims 12, 13, 31, and 32 have been canceled.

Claims 8 and 14 include the limitation of a processor determining the patient’s sleep stage based at least in part on a received EEG signal, and a gas delivery device in communication with said processor, the gas delivery device delivering gas to the patient based on the processor determination of said patient’s sleep stage.

Miles does not disclose sleep stage determination and a gas delivery device controlled by a processor. Miles also does not disclose a processor adapted to adjust the delivered gas based upon the processor determination of sleep stage.

Because Miles does not disclose all of the features of claims 8 and 14, Applicant respectfully asserts that claims 8 and 14 are not anticipated by Miles. Moreover, because claim 8 is not anticipated by Miles, claims 9-11, which are dependent on claim 8, are also not anticipated by Miles. Because claim 14 is not anticipated by Miles, claims 15, 24, and 25 are also not anticipated by Miles.

Claims 21 and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,584,296, the “Cui” patent.

Claim 17, upon which claims 21 and 22 depend, includes the limitation of determining sleep stage based at least in part on a received EEG signal, and a gas delivery device in communication with a mask adapted to detect the EEG signal, the gas delivery device delivering gas to the patient based on the determination of said patient’s sleep stage.

Cui does not disclose sleep stage determination based on EEG signals detected by a mask. Cui also does not disclose a mask adapted to adjust delivered gas based on the determination of sleep stage.

Because Cui does not disclose all of the features of claim 17, Applicant respectfully asserts that claim 17 is not anticipated by Cui. Moreover, because claim 17 is not anticipated by Cui, claims 21 and 22, which are dependent on claim 17, are also not anticipated by Cui.

For the foregoing reasons, Applicant respectfully requests reconsideration of the rejections based on 35 USC 102.

V. Claim Rejections 35 USC 103

Claims 17-20 were rejected under 35 U.S.C. § 103(a) as being obvious over US Patent No. 5,353,788, the “Miles” patent.

Claim 17 includes the limitation of determining sleep stage based at least in part on a received EEG signal, and a gas delivery device in communication with a mask adapted to detect

the EEG signal, the gas delivery device delivering gas to the patient based on the determination of said patient's sleep stage.

Miles does not teach or suggest sleep stage determination based on EEG signals detected by a mask. Miles also does not teach or suggest a mask adapted to adjust delivered gas based on the determination of sleep stage. Moreover, the differences between Miles and the claimed invention are so great as to render claim 17 non-obvious to one of ordinary skill in the art.

It is submitted that computer (25) in Miles does not determine patient sleep stage. Sleep stages are demarcated by significant polysomnographic characteristics that distinguish the boundaries of the sleep stages. Sleep stage 1 - a stage of non-REM (NREM) sleep occurring after wake. Its criteria consist of a low-voltage EEG with slowing to theta frequencies, alpha activity less than 50%, EEG vertex spikes, and slow rolling eye movements; no sleep spindles, K-complexes, or REMS. Stage 1 normally assumes 4-5% of total sleep. Sleep stage 2 - a stage of NREM sleep characterized by sleep spindles and K complexes against a relatively low-voltage, mixed-frequency EEG background; high-voltage delta waves may comprise up to 20% of stage 2 epochs; usually accounts for 45-55% of total sleep time. Sleep stage 3 - a stage of NREM sleep defined by at least 20 and not more than 50% of the period (30 second epoch) consisting of EEG waves less than 2 Hz and more than 75 uV (high -amplitude delta waves); a "delta" sleep stage; with stage 4, it constitutes "deep "NREM sleep; appears usually only in the first third of the sleep period; usually comprises 4-6% of total sleep time. Sleep stage 4 - all statements concerning NREM stage 3 apply to stage 4 except that high-voltage, slow EEG waves, cover 50% or more of the record; NREM stage 4 usually takes up 12-15% of total sleep time. Somnambulism, sleep terror, and sleep-related enuresis episodes generally start in stage 4 or during arousals from this stage. Sleep Stage REM - the stage of sleep found in all mammal studies, including man, in which brain activity is extensive, brain metabolism is increased, and vivid hallucinatory imagery, or dreaming occurs (in humans). Also called "paradoxical sleep" because, in the face of this intense excitation of the CNS and presence of spontaneous rapid eye movements, resting muscle activity is suppressed. The EEG is a low-voltage, fast-frequency, non alpha record. Stage REMS is usually 20-25% of total sleep time.

Because Miles does not teach, suggest, or render obvious the invention of claim 17, Applicant respectfully asserts that claim 17 is not unpatentable over Miles. Moreover, because claim 17 is not unpatentable over Miles, claims 18-20, which are dependent on claim 17, are also not unpatentable over Miles.

Claims 1-7, 16, 27-29, and 30 were rejected under 35 U.S.C. § 103(a) as being obvious over US Patent No. 5,353,788, the “Miles” patent, in combination with other references.

Claims 1, 8 and 14 include the limitation of a processor determining the patient’s sleep stage based at least in part on a received EEG signal, and a gas delivery device in communication with said processor or a breathing mask, the gas delivery device delivering gas to the patient based on the processor determination of said patient’s sleep stage.

The combination of Miles and the other cited art, even if proper, would fail to yield sleep stage determination and a gas delivery device controlled by a processor. Sleep stage is discussed above. Miles also does not disclose a processor adapted to adjust the delivered gas based on the processor determination of sleep stage.

Because Miles in combination with the other cited references does not teach, suggest, or render obvious all of the features of claims 1, 8 and 14, Applicant respectfully asserts that claims 1, 8 and 14 are not unpatentable over the cited art. Moreover, the remaining claims rejected as being unpatentable over Miles in combination with other art are dependent on claims 1, 8, and 14; therefore, the remaining claims are also not unpatentable over Miles.

Claims 23 is rejected as being unpatentable over Miles in view of Brown. Claim 23 is dependent on claim 17. As discussed above, claim 17 is non-obvious over Miles. Brown does not compensate for the deficiencies of Miles. Therefore, claim 23 is not unpatentable over Miles in view of Brown.

Claim 26 is rejected as being unpatentable over Tripp. Claim 26 is dependent on claim 17. The above discussion of claim 17 in relation to Miles is applicable to claim 17 in relation to

Tripp. In sum, Tripp does not teach, suggest, or render obvious the invention of claim 17. Therefore, claim 17 is not unpatentable over Tripp, and consequently claim 26 is also not unpatentable over Tripp.

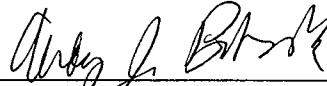
For the foregoing reasons, Applicant respectfully requests reconsideration of the rejections based on 35 USC 103.

VI. Conclusion

In view of the above remarks and amendment, Applicant believes the pending application is in condition for allowance.

Respectfully submitted,
Compumedics Limited, BY ITS ATTORNEYS

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